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VOL. 17 No. 25 June 23, 1967

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Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearinghouse and does not assume responsibility for accuracy of the material.

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Hyattsville, Maryland 20782

Volume 17 June 23, 1967 Number 25

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

ARMYWORM troublesome in wheat in northeast Missouri; damaging corn in Ohio and several crops in Indiana; activity and damage expected to be above normal in Maine. CORN EARWORM appears more damaging to corn than for several years in 2 South Carolina counties. (p. 529). TOBACCO HORNWORM problem on tobacco for first time this season in Florida. (p. 530). GREEN PEACH APHID considerably above normal on tobacco beds in southern Maryland; could become problem in Pittsylvania County, Virginia. (p. 538).

EUROPEAN CORN BORER egg masses reported in Massachusetts, New York, New Jersey, and Missouri; small larvae in corn in some areas. (p. 530). SORGHUM MIDGE damaging in central Texas. (p. 531). SLUGS damaging several crops. (pp. 531, 540, 543).

ALFALFA WEEVIL infestations heavy and increasing; extensive damage continues in Ohio and other areas. (pp. 533-534). PEA APHID continues problem on alfalfa throughout New Mexico; heavy on some alfalfa in California, very heavy in New Jersey. (p. 534). LYGUS BUGS increasing on alfalfa in areas of Arizona. FALL ARMYWORM and LESSER CORNSTALK BORER damaging peanuts in Brazos County, Texas. (p. 535).

BOLL WEEVIL emergence increasing in Florence area of South Carolina, continues heavy in southern Georgia; very active in western Tennessee; large numbers continue to emerge over Alabama. (p. 536). BOLLWORMS damaged cotton in Louisiana; egg laying common in Alabama; infestations appearing in Mississippi and range moderate to heavy in some Arizona cotton. (pp. 536-537). THRIPS damaging cotton in several areas. (p. 537).

Appearance of POTATO FLEA BEETLE and COLORADO POTATO BEETLE adults expected to be delayed on Virginia Eastern Shore; damage reported in other areas. (pp. 538, 539). SPIDER MITES problem on tomatoes in Alabama, threatening in southern California (p. 539). ASPARAGUS BEETLES troublesome in some Eastern States. (p. 540).

WESTERN PINE BEETLE killing ponderosa pines on 3,000-acre stand in Tuolumne County, California. (p. 546).

MOSQUITOES remain troublesome in several areas. CATTLE GRUB adults running cattle in Utah and Nebraska. HORN FLY continues to increase in New Jersey; heavy in Oklahoma. (p. 546). HOUSE FLY annoying cattle in some areas; controls recommended for cattle and poultry in New Jersey. (p. 547).

GRASSHOPPERS at economic levels in areas of South Dakota, Oklahoma, and New Mexico. (pp. 548, 549). CEREAL LEAF BEETLE moderate to heavy on oats in area of Indiana. (p. 549). First JAPANESE BEETLE adults of season reported in Rhode Island, Virginia, and South Carolina. (p. 550).

Detection

New State records, 2 PLANT BUGS, Delaware. (p. 551). New county records.(p. 551).

Predictions

RANGE CATERPILLAR may cause serious losses in New Mexico. (p. 532).

Special Reports

Infestation by Sugarcane Borer and Crop Loss in Louisiana Lower in 1966 Than in 1965. (pp. 530-531).

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Reports in this issue are for week ending June 19 unless otherwise indicated.

WEATHER BUREAU'S 30-DAY OUTLOOK

MID-JUNE TO MID-JULY 1967

The Weather Bureau's 30-day outlook for mid-June to mid-July is for temperatures to average above seasonal normals east of the Continental Divide except for near to below normal in the Northeast and in Florida. Below normal temperatures are expected in west coast States and the Great Basin while near normal temperatures are anticipated elsewhere. Precipitation is expected to exceed normal from eastern portions of the northern Plains eastward to the Great Lakes region, and also over the Pacific Northwest, the southern Plateau region, and Florida. Little or no precipitation is indicated for the southern Plains, most of the middle and south Atlantic Coast States and the far Southwest. In unspecified areas near normal rainfall is in prospect.

Weather forecast given here is based on the offical 30-day "Resume and Outlook" published twice a month by the Weather Bureau. You can subscribe through the Superintendent of Documents, Washington, D. C. 20250. Price $5.00 a year.

For Weather of the Week see page 554.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMYWORM (Pseudaletia unipuncta) - MAINE - Flight heavy June 7; total of 19 adults taken in blacklight trap at Monmouth. Single moth taken June 8; activity diminished due to rain and cool temperatures. Total of 30 moths collected June 9-12. Activity above normal; higher than normal activity and damage expected this season. Eggs being laid; should hatch in about 14 days. (Boulanger, June 14). MASSACHUSETTS - Total of 15 taken in blacklight trap at East Wareham, Plymouth County, June 3-9. (Tomlinson). DELAWARE - Larvae present on corn in areas of Kent and Sussex Counties. (Burbutis). VIRGINIA - Larvae heavy in sod-planted corn in Pulaski County. Treatment apparently very satisfactory. (Scyphers). OHIO - Damaged numerous corn fields in 10-square-mile area in Wayne County. Damage moderate to heavy in 3 reported instances. (Glass, Berry). Infested Champaign County timothy hay (Rinehart, Blair); nondamaging numbers on Auglaize County wheat (Rose). INDIANA - Very severe local outbreaks damaged wheat, corn, and grass pastures throughout west-central area. (Lehker). ILLINOIS - Declining in south-central section as larvae pupate or die; still damaging in central area. (Kuhlman). MISSOURI - Moderate to heavy on some wheat in northeast area; ranged 4-15 fourth instars per square foot. Larvae light in most fields; 0-3 per square foot. Parasitism very low. (Munson). IOWA - Averaged 2 larvae per square yard in brome in central area. (Gunderson).

BEET LEAFHOPPER (Circulifer tenellus) - WASHINGTON - Adults abundant on sugarbeets. Much curly top in nonresistant varieties at upper Yakima Valley, Yakima County. (Wallis).

CORN EARWORM (Heliothis zea) - SOUTH CAROLINA - Appears more damaging to corn than for several years in Clarendon and Lee Counties; most larvae in late stages. Large numbers expected to move into cotton and tomatoes in some areas week of June 18. (Nettles et al., June 13). ALABAMA - Larvae medium in whorls of corn in 40-acre field in Cleburne County; corn in early tassel stage. Full-grown larvae frequently noted in whorls of corn in Colbert, Madison, and St. Clair Counties. (Ventress et al.). MISSISSIPPI - Less than 1 percent of corn plants checked showed whorl damage in Pontotoc County. Approximately 10 percent of sweet corn ears infested in Yazoo County field. (Dinkins). MISSOURI - Fed in whorls of corn not tasseled in southeast area. Up to 10 percent of plants in some fields infested. (Jones). TEXAS - Light to moderate in corn in Wilson, Hays, Guadalupe, and Caldwell Counties. Up to 1-4 larvae in many ears. (Massey). ARIZONA - Larvae infesting 20 percent of sorghum terminals in Yuma Valley, Yuma County. (Ariz. Coop. Sur.).

CORN LEAF APHID (Rhopalosiphum maidis) - ALABAMA - Light in whorls of all corn examined in Colbert, Madison, and St. Clair Counties. Light to heavy, 25-100 per plant, in whorls of Johnson grass just prior to seed head emerging in corn and cotton fields. (McQueen). MISSISSIPPI - Alates present in 8 percent of mosaic diseased Johnson grass in whorl stage around corn field in Yazoo County. At least one alate in whorls of 18 percent of young corn plants 2-3 inches tall. (Dinkins). NEVADA - Light, spotty numbers in grain in Hualapai Valley, Washoe County. (Gallaway, Martinelli).

GREENBUG (Schizaphis graminum) - WISCONSIN - Increase very slight in oats. "Red leaf" detected in few areas. (Wis. Ins. Sur.). MINNESOTA - Occasional field in central district with up to 50 per 100 sweeps. Lady beetles and lacewings increasing. (Minn. Ins. Rpt.). NORTH DAKOTA - No increase noted; high of 3 per 100 sweeps on Cass County barley. (Brandvik).

POTATO LEAFHOPPER (Empoasca fabae) - VIRGINIA - Adults averaged 2 per 10 sweeps in alfalfa in Nottoway County. (Isakson). MISSOURI - Adults ranged 5-35 per 10 sweeps in alfalfa in central, east-central, and northeast areas. (Munson). WISCONSIN - Some on alfalfa in southwestern and central counties. Highest in Dane County with 3 per 10 sweeps. (Wis. Ins. Sur.).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - NEW YORK - Numerous in lettuce fields; controls should be underway to minimize spread of lettuce yellows. (Muka). WISCONSIN - Averaged 8 per 50 sweeps in oats in Iowa, Grant, and Columbia Counties. Averaged 1 per 50 sweeps in central counties in oats. No aster yellows on central area lettuce. (Wis. Ins. Sur.). IOWA - Ranged 1-14 per 10 sweeps in alfalfa and red clover in central and west-central areas. (Mast). MISSOURI - Corn field in Shelby County had 8-50 per plant feeding on marginal rows. Field next to plowed soil bank land. Plants small; damage severe to marginal rows. (Munson).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEW MEXICO - Definite buildup in Pecos Valley, especially in Roswell and Artesia area. Control necessary. (Wade). Light to heavy and spotty in southern Dona Ana County. (Campbell). NEBRASKA - Ranged 0-2 (averaged 1) per 10 sweeps in Lancaster County field. None found in Gage County. (Keith). SOUTH DAKOTA - Low, less than 10 per 100 sweeps, in alfalfa sampled near Spearfish, Lawrence County. (Jones).

TOBACCO HORNWORM (Manduca sexta) - FLORIDA - Reported as problem for first time this year. Second and third instars very light on flue-cured tobacco at Mayo, Lafayette County. (Strayer, Whitty).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - ALABAMA - Second and third instars heavy (2-10 per cornstalk) in 15-acre field of pretasseling corn in Colbert County. Part of mixed infestation, including southwestern corn borer and lesser number of corn earworm, in whorls. O. nubilalis heavy and caused severe damage in this field last year. Grower plans to cut corn immediately and feed to cattle rather than experience loss to crop as last year. Moth emergence 20-30 days ago apparently extremely heavy as some egg laying occurred on nearby cotton where few larvae now feeding in stalks. Larvae numerous in St. Clair County corn field on Chandler Mountain. (Reid et al.). MISSISSIPPI - No infestation found in 4 corn fields checked in Pontotoc County. (Dinkins). MISSOURI - Leaf feeding damage on corn over 30 inches tall ranged 0-30 percent in central and east-central areas and 0-8 percent in extreme northeast area. Feeding damage light in southeast area; less than 10 percent of plants in fields checked in this area had leaf feeding. (Jones). Very few egg masses observed in any areas checked. Moth emergence 92 percent in field in extreme northeast area. (Munson). NEBRASKA - First moths of season in blacklight trap at Mead, Saunders County. (Keith, May 28). NORTH DAKOTA - Percent pupation in east-central and southeast counties: Cass 4, Sargent 22, Richland 35, and Ransom 8. Averaged 11 for all counties. Adult emergence light. Tallest corn 6 inches high. (Brandvik). MINNESOTA - Pupation slow in southwest and west-central districts; less than 10 percent. (Minn. Ins. Rpt.). WISCONSIN - Adults continue in blacklight traps at Madison and Platteville. Some young larvae feeding in corn whorls in Walworth County. (Wis. Ins. Sur.). ILLINOIS - Percent adult emergence by district: South-central 100, central 64-88, north-central 30-90, and north 24. Eggs laid on 15 to 30-inch corn in southern, south-central, central, and north-central districts. Egg masses averaged 200 per 100 plants in early planted south-central area field. Averaged 50-70 egg masses per 100 plants on 30-inch corn in central and north-central areas. (Kuhlman). NEW JERSEY - Egg masses on sweet corn from Middlesex County south; extremely heavy in field near Hamilton Township, Mercer County; one larva present. Two egg masses per 100 plants near New Market, Middlesex County. (Ins.-Dis. Newsltr.). MASSACHUSETTS First egg masses on 6 to 8-inch sweet corn at Franklin, Norfolk County; egg masses on about 1 per 6 plants. (Wave). NEW YORK - Changing rapidly in hot weather. In cages about 6 percent emerged as moths June 12; moths appeared in trap and hedgerow. Eggs first detected in Rockland June 7, and hatched June 11. Expected to be important. (N. Y. Wkly. Rpt., June 12).

Infestation by Sugarcane Borer (Diatraea saccharalis) and Crop Loss in Louisiana Lower in 1966 Than in 1965 - The annual harvesttime survey to determine degree of infestation and crop loss showed 14 percent of the joints (internodes) of sugarcane bored, with an estimated crop loss of 11 percent. Infestations in 1965 averaged

18 percent. For the 31-year period 1935-1965 joints bored averaged 16 percent. The sugarcane belt was struck by a rather hard unprecidented freeze on November 3, about 2 weeks after the beginning of harvest, the temperature in many places reaching 23°F. The freeze caused considerable damage to cane, necessitating lower topping and leaving some late-generation borer infestation in the field. (Ent. Res. Div., Hauma, La.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ALABAMA - One to two second instars boring into and feeding in developing stalks of 15-acre field of pre-tasseling corn in Colbert County. Excessive leaf feeding evident where eggs hatched and prior to larvae entering whorls and stalks. Few larvae observed in pretassel corn in garden in Madison County. This is first generation of year. (Hood et al.). MISSISSIPPI - None found in 4 corn fields checked in Pontotoc County. (Dinkins).

FALL ARMYWORM (Spodoptera frugiperda) - TEXAS - Heavy larval population destroyed 50-acre field of 8-inch milo near Caldwell, Burleson County, in about 4-day period. Larvae averaged approximately 25-30 per foot of row. (Engbrock).

CUTWORMS - NEW JERSEY - Damage heavy to field corn near Hope, Warren County. (Ins.-Dis. Newsltr.). DELAWARE - Several species feeding heavily on young corn in several areas. (Burbutis). MINNESOTA - Damaged corn in Yellow Medicine County. Damage light in some central district fields. (Minn. Ins. Rpt.). NEBRASKA - Euxoa detersa damaged corn in Antelope County. (Ehlers).

BLACK CUTWORM (Agrotis ipsilon) - See page 550.

CORN ROOTWORMS (Diabrotica spp.) - MINNESOTA - No hatch in southwest and central districts.(Minn. Ins. Rpt.). NEBRASKA - D. virgifera and D. longicornis hatch delayed by prolonged cool weather. (Lawson). TEXAS - D. longicornis larvae heavy on roots of corn in Medina County field. (Deer).

CORN FLEA BEETLES (Chaetocnema spp.) - NEW YORK - C. pulicaria ranged 4-30 per 100 plants except on freshly sprayed corn. (N. Y. Wkly. Rpt., June 12). OHIO - C. pulicaria damaged young corn in heavily infested Wayne County field. (Barry). ARIZONA - Increasing populations of C. ectypa causing light leaf damage to newly planted corn in Yuma, Maricopa, and Pinal Counties. (Ariz. Coop. Sur.).

SEED-CORN BEETLE (Agonoderus lecontei) - WISCONSIN - Necessitated some replanting of corn in Ripon area. (Wis. Ins. Sur.).

POTATO FLEA BEETLE (Epitrix cucumeris) - OHIO - Heavy on Darke County corn. (Juester).

WIREWORMS - MINNESOTA - Necessitated replanting of corn in 2 Lyon County fields. Fields in "idle acres" program in 1966. (Minn. Ins. Rpt.).

THRIPS - MISSOURI - Ranged 10-100 per small corn plant in central and east-central areas; feeding damage evident. (Munson). DELAWARE - Abundant on corn and causing noticeable injury in several areas. (Burbutis). MARYLAND - Infesting young corn in Wicomico and Worcester Counties. (U. Md., Ent. Dept.).

SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Sporadic but widespread and damaging populations of 4-8 midges per newly emerged head found in some fields in most central counties south of Hill County by June 16. Economic damage expected in most fields blooming in this area beyond this date. (Thomas).

SLUGS - OHIO - Infested 2 Franklin and Clark County corn fields. In Clark County, 4 acres of 10-acre field affected. Some corn completely eaten, in others leaves riddled. Infestation occurred in low-lying soil high in organic matter. (Miller, June 8-9). MARYLAND - Deroceras reticulatum heavily damaged 3 acres of field corn near Taneytown, Carroll County. (U. Md., Ent. Dept.).

SMALL GRAINS

ENGLISH GRAIN APHID (Macrosiphum avenae) - WISCONSIN - Increased slightly on oats in southwestern and central counties; averaged about 25 per 50 sweeps. Some "red leaf" of oats observed in few central counties and in Chippewa County. (Wis. Ins. Sur.). MINNESOTA - Numbers low in most fields. Lady beetles and lacewings increasing. (Minn. Ins. Rpt.). NORTH DAKOTA - Remains light; high of 24 per 100 sweeps on Cass County rye. (Brandvik). UTAH - Light on dryfarm fall wheat in Nephi-Levan area, Juab County. (Knowlton).

GRASS BUGS - UTAH - Small numbers of Irbisia pacifica moved to wheat adjacent to severely bleached intermediate and crested wheatgrass in Beaver Dam area of Box Elder County. (Knowlton).

SUGAR-BEET WIREWORM (Limonius californicus) - IDAHO - Larvae ranged up to 3 per plant on 300 acres of Gaines wheat planted on land in ryegrass seed last season. Some bare areas up to 15 feet in diameter observed. Population 90 percent full grown; will pupate this season. Det. by M. C. Lane. (Hackler, Portman, May 12).

TURF, PASTURES, RANGELAND

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Hatch began June 1; almost complete in most parts of Farley and Abbot area, Colfax County, June 7; just beginning in area north of Roy, Harding County. Ranged 70-160 larvae per group for 5 groups counted. Occasional larval group in area treated summer of 1966; in areas untreated in 1966 and with abundant egg masses this spring, as high as 2-8 groups of larvae present per square yard. Infested area not delimited. Larvae, eggs, and pupae found in Raton area to northwest and as far south as 5 miles north of Roy. Only small percentage of eggs parasitized. Serious losses may occur in heavily infested areas this summer. These areas may be source for wider distribution. (Nielsen).

A SOD WEBWORM (Crambus sp.) - TEXAS - Larvae heavy and caused severe damage to buffalo grass lawns near Graham, Young County. Larvae as deep as 6-8 inches in sandy type soil. (McCarroll).

GRASS BUGS - UTAH - Labops hesperius damaged crested wheatgrass areas in Parowan Valley, Iron County. (Knowlton, Sjoblom). Irbesia pacifica moderately discolored wheatgrasses in Logan Canyon, Petersboro, and Mendon, Cache County. Wheat fields near heavily infested intermediate wheatgrass at Beaver Dam, Box Elder County. (Knowlton).

YELLOW SUGARCANE APHID (Sipha flava) - TEXAS - Heavy and causing much damage in 30 to 40-acre field of Coastal Bermuda grass in Williamson County. Grass stunted and hay production decreased drastically. Previously not recorded as pest of this crop in State. (Doby).

ENGLISH GRAIN APHID (Macrosiphum avenae) - WASHINGTON - Mostly small nymphs of this species and Rhopalosiphum fitchii light (3-5 per head) in bluegrass seed fields near Walla Walla, Walla Walla County. (Johansen, Eves).

FIELD CRICKETS (Gryllus spp.) - CALIFORNIA - General on range plants in the Bear Valley in Williams area of Colusa County. Infestations periodic in northern and central areas of State. This early occurrence may indicate heavy nuisance this season if weather favorable. (Cal. Coop. Rpt.).

FRIT FLY (Oscinella frit) - NEW MEXICO - Serious at golf course at Las Cruces. Adults range 70-100 per 25 sweeps. (Campbell).

SAWFLIES - UTAH - Larvae defoliated crested wheatgrass in Parowan Valley, Iron County. (Knowlton, Sjoblom). Larvae light, but common on intermediate wheatgrass range areas discolored by Irbisia pacifica in Beaver Dam area of Box Elder County. (Knowlton).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - NEW HAMPSHIRE - Percent tip injury 10-30 in Hollis and Nashua area; 1-10 in southeastern area. (Sutherland). VERMONT - Buildup continues; 30-40 percent injury in most fields. (MacCollom, June 12). MASSACHUSETTS - Numbers per 100 sweeps and percent damage by county June 9: Bristol - adults 1-38, damage 34-90; Plymouth - adults 4-25, larvae 10-1,090, damage 2-100; Hampshire - adults 1-12, larvae 65-1,172, damage 10-80; Berkshire - adults 2-40, larvae 20-869, damage 22-84; Franklin - adults 0-21, larvae 0-146. Larvae 10-1,172 per 100 sweeps. Percent alfalfa injury by county June 12: Hampshire 10-80; Berkshire 22-84; Plymouth 2-100; and Bristol 24-90. Current counts per 100 sweeps of alfalfa 20-32 inches by county: Berkshire - adults 4-15, larvae 82-695; Essex and Middlesex - adults 1-6, larvae 80-153; Hampshire - adults 2-15, larvae 157-801; and Worcester - adults 1-9, larvae 25-233. (Miller). RHODE ISLAND - Adults, larvae numerous; larval feeding evident in fields in Kingston, Washington County. (Mathewson, June 8). NEW YORK - Peak infestation in much of central area. Many fields in Tioga and Tompkins Counties severely injured. Pupation underway. Many eggs laid and hatched in Broome County May 29-June 2. Numbers exploded June 6-12. Older stands less injured. Unsprayed, uncut alfalfa will be just stalks in over 90 percent of Broome County fields by June 20. Heavy in unsprayed Ulster County field; hay quality seriously reduced. (N. Y. Wkly. Rpt., June 12). PENNSYLVANIA - Causing economic damage to alfalfa for first time in Erie County area. All 800 thousand acres of alfalfa in State need controls. (Adams). NEW JERSEY - Larvae very active in many areas of State. Considerable acreage stubble treated. In one large alfalfa field near Cranbury, 160 larvae per sweep collected June 13. (Ins.-Dis. Newsltr.). MARYLAND - Larvae, up to 20 per sweep, damaging second-growth alfalfa in Frederick County. (U. Md., Ent. Dept.). VIRGINIA - Larvae light (2-10 per 10 sweeps) in alfalfa in Nottoway County; adults averaged 3 per 10 sweeps. About 10 percent of alfalfa in bloom. (Isakson).

OHIO - Extensive damage continues except in northwest area. First cutting of alfalfa 40 percent completed. (Ohio Crop & Weather Bull.). In most Wayne, Ashland, and Medina County fields, stubble sprayed to protect second growth. Treatment of first growth in area successful in most instances. Damaged alfalfa in these counties early this year; warm June temperatures brought rapid increase in larval numbers and crop damage. Most damage expected to be over within 14 days. In unsprayed stubble, damage may last for 21 more days. In Wayne and Medina Counties, larvae estimated at 3 per square inch in one field of stubble and many young larvae in another. (Glass). Untreated fields in Logan and Mercer Counties averaged 48 and 29 larvae per sweep respectively; estimated 50-90 percent leaf damage and 20-50 percent loss. Larvae 5 per sweep in Allen County field; little damage. (Rose). In Wood County, approximately 3-4 larvae per sweep. (Jones). Some badly damaged fields, gray in appearance, in Lorain County and numerous in Wayne County. (Niemczyk). INDIANA - Larvae and adults in 2 fields surveyed in Whitley County for new county record. (Smith). ILLINOIS - Found for first time in Stark and Putnam Counties. (Kuhlman). MISSOURI - Total of 4 larvae and 1 adult collected in Adair County alfalfa field for new county record. (Munson). MISSISSIPPI - Larvae per 100 stems averaged 2 in flame treated alfalfa, 12 in untreated alfalfa in Pontotoc County. Total of 73 larvae and 4 adults taken in flame treated alfalfa and 254 larvae and 4 adults from untreated alfalfa per 50 sweeps of 15-inch net. Larvae ranged from first instar to prepupae, indicating peak of second-generation adult emergence will occur next 14 days. (Dinkins). SOUTH DAKOTA - Increased markedly in some Lawrence County fields near Spearfish. Mostly first and second instars ranged up to 600 per 100 sweeps compared with 200 previous week. Less than one per sweep in fields checked east of Hermosa, Custer County, and Oral, Fall River County. (Jones, Kantack). NEBRASKA - One larva in 150 sweeps near Ringgold, McPherson County, for new county record. None in Brown County. (Manglitz, June 5). Ranged 0-198 (averaged 25) per 50 sweeps in Dawson County alfalfa. (Manglitz, Neiman). COLORADO - Adult populations high in San Miguel County; 120 per 100 sweeps. Larvae and adults low on alfalfa in Las Animas County; 20-50 larvae and 10-20 adults per 100 sweeps. Populations in Delta, Mesa, and Montrose Counties at same level as previous week. (Haslem et al.).

NEW MEXICO - Widespread, heavy on alfalfa in Farmington and Aztec area, San Jaun County; averaged 80-200 larvae and 2-10 adults per 25 sweeps. (Heninger, Kloepfer). UTAH - Caused much damage in Millard County as storms prevented harvest and spraying. Hay cut to prevent weevil damage, largely injured by storms which prevented removal from fields. Much alfalfa cut in various counties before injury became serious. Storms made harvest difficult and delayed. Damage occurring in numerous fiedls in Sevier County where about 50 percent of acreage sprayed. (Knowlton). Damage severe in many Millard County alfalfa fields. (Hall, Knowlton). NEVADA - Damage continues in Churchill, Douglas, Lyon, Pershing, and southern Washoe Counties. Chemical control still applied and increasing as weather continues to improve. (Nev. Coop. Rpt.). OREGON - Averaged 46 larvae per sweep June 14 in Crook County alfalfa fields. (Dickason). WASHINGTON - Larvae severely damaged alfalfa at Ellensburg, Kittitas County, for new county record. This extends range considerably northward and westward into extensive alfalfa-growing areas. (Retan, Bloom).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - VERMONT - Feeding on buds of birdsfoot trefoil. Numbers sufficient for concern. (MacCollom, June 12). MISSOURI - In all red clover checked in northeast area; adults ranged 4-45 per 10 sweeps. (Munson).

CLOVER SEED WEEVIL (Miccotrogus picirostris) - IDAHO - Reaching economic levels in white clover fields in Bonners Ferry, Boundary County. Controls recommended. (Studer, Gittins).

CLAY-BACKED CUTWORM (Agrotis gladiaria) - PENNSYLVANIA - Destroyed 16 acres of new alfalfa seeding in Huntingdon County; averaged 4 larvae per foot between plant rows. (Udine).

PEA APHID (Acyrthosiphon pisum) - NEW JERSEY - Very heavy in alfalfa near Cranbury. (Ins.-Dis. Newsltr.). VIRGINIA - Few in alfalfa (less than 10 per sweep) in Nottoway County. (Isakson). IOWA - Ranged 5-19 per 10 sweeps in alfalfa and clover in central and west-central areas. (Mast). WISCONSIN - Continues to decline in alfalfa and peas. Less than one per sweep in southern alfalfa. (Wis. Ins. Sur.). SOUTH DAKOTA - Continues to increase in some western area alfalfa. Near Oral, Fall River County, counts as high as 80-100 per sweep in 18 to 20-inch alfalfa, although as low as 4-20 per sweep in some fields. Predators present. In Buffalo Gap area, Custer County, counts lower than in irrigated fields near Oral. Up to 8-10 per sweep in some Lawrence County fields near Spearfish. (Jones, Kantack). NEBRASKA - Ranged 0-30 (averaged 14) per 10 sweeps in Gage and Lancaster County alfalfa. (Keith). COLORADO - Moderate on alfalfa in Las Animas County; 3,000 per 100 sweeps. (Hantsbarger, Jenkins). NEW MEXICO - Continues problem throughout most of State. Averaged 1-2 tablespoons of nymphs per 25 sweeps in Farmington and Aztec area. (Campbell et al.). UTAH - Generally light on alfalfa in northern and central areas. (Knowlton). NEVADA - Averaged 5 per sweep in Hualapai Valley, Washoe County, alfalfa hay fields. (Gallaway, Martinelli). CALIFORNIA - This species and Myzus persicae heavy on some alfalfa plantings in Woodland, Yolo County. (Cal. Coop. Rpt.).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - MISSOURI - In all alfalfa fields checked in northeast area; ranged 5-30 per 10 sweeps. (Munson). NEBRASKA - Adults and nymphs light on Lancaster and Gage County alfalfa. Ranged 0-18 (averaged 8) per 10 sweeps. (Keith). IOWA - Ranged 6-30 per 10 sweeps in central and west-central area alfalfa. No damage evident. (Mast). WISCONSIN - All stages common in central and southern alfalfa fields. Averaged 4 per sweep in most fields; only 5 percent adults. (Wis. Ins. Sur.).

RAPID PLANT BUG (Adelphocoris rapidus) - NEBRASKA - Very light (averaged less than 1 per 10 sweeps) in Lancaster County alfalfa. (Keith). IOWA - Ranged 3-12 per 10 sweeps in central and west-central area alfalfa. (Mast).

TARNISHED PLANT BUG (Lygus lineolaris) - MISSOURI - Most common insect in red clover and alfalfa; ranged 6-40 per 10 sweeps. (Munson).

LYGUS BUGS (Lygus spp.) - ARIZONA - Adults increasing in alfalfa in Yuma, Maricopa, and Pinal Counties; average 70 per 100 sweeps. Heavy (400 per 100 sweeps) in San Simon area of Cochise County. (Ariz. Coop. Sur.). NEW MEXICO - Counts per 25 sweeps in alfalfa: 20-50 in Dona Ana County; 5-25 larvae, 2-5 adults in northern San Juan County. (Campbell, Heninger). Heavy, averaged 2-4 adults and 4-12 nymphs per sweep in 2 Curry County alfalfa fields. Foliage damage very noticeable. (Nielsen). UTAH - Nymphs generally light in northern and central alfalfa fields. (Knowlton). NEBRASKA - Ranged 3-18 (averaged about 7) per 10 sweeps on Gage and Lancaster County alfalfa. (Keith).

MEADOW SPITTLEBUG (Philaenus spumarius) - MISSOURI - Collected from red clover and alfalfa in Adair, Knox, Marion, Scotland, and Shelby for new county records. Collected June 1 in Clark County for new county record. (Munson). WISCONSIN - Adults appearing in some Grant and Iowa County fields; most nymphs third and fourth instar. Highest in southwestern counties. (Wis. Ins. Sur.). OHIO - Some subsequent dispersion occurred throughout State. Adults in alfalfa in Logan, Allen, and Mercer Counties, averaged 5-30 per sweep. (Rose). RHODE ISLAND - Nymphs common on variety of plants statewide. (Mathewson et al., June 8).

SOYBEANS

BEAN LEAF BEETLE (Cerotoma trifurcata) - MINNESOTA - Damaged soybeans in Renville County. Numbers high last year in southeast corner of county near Fairfax. Light in McLeod County. (Minn. Ins. Rpt.). MARYLAND - Adults causing light foliage damage to soybeans in Saint Marys and Wicomico Counties. (U. Md., Ent. Dept.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - SOUTH CAROLINA - Damage to young soybeans apparently declining. (Nettles et al., June 13).

GREEN CLOVERWORM (Plathypena scabra) - MISSISSIPPI - Light numbers appearing in soybeans in Yazoo County. Approximately 3-4 larvae per 200 feet of row taken with vacuum sweeper. (Dinkins).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - DELAWARE - Few larvae present on soybeans in New Castle and Kent Counties. (Burbutis).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - SOUTH CAROLINA - Infesting soybeans in Piedmont area. (Nettles et al., June 13).

GREEN STINK BUG (Acrosternum hilare) - MISSISSIPPI - Averaged 2-3 per 200 feet of row in Yazoo County soybeans. (Dinkins).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - MISSISSIPPI - Numbers continue high in Yazoo County soybeans. Averaged approximately 15-25 per 200 row feet. (Dinkins).

THRIPS - MARYLAND - First infestations of season found on young soybeans in Wicomico County. (U. Md., Ent. Dept.). DELAWARE - Sericothrips variabilis averaged 3-4 per leaf on young soybeans in areas of Sussex County and 1-2 per leaf in Kent County. (Burbutis).

PEANUTS

FALL ARMYWORM (Spodoptera frugiperda) - TEXAS - Larvae causing much defoliation of peanuts near Bryan, Brazos County. (Texas Coop. Rpt.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - GEORGIA - Damage ranged light to severe in most fields in Seminole County; heaviest on sandier soils. (Paine). TEXAS - Moderate to heavy in root systems of peanuts near Bryan, Brazos County. Approximately 75 percent of plants 4-5 inches high. (Texas Coop. Rpt.).

COTTON

BOLL WEEVIL (Anthonomus grandis) - SOUTH CAROLINA - Found on squaring cotton in Bowman area, Orangeburg County. Damage heavy in some fields. (Nettles et al., June 6). Emergence increasing in Florence area, but numbers relatively small in fields. Weevils ranged 28-483 per acre in untreated plots. (Taft et al., June 14). TENNESSEE - Very active in regularly infested portion of State. Feeding on terminal buds. Weevils more active in early morning; difficult to find later in day. (Locke). GEORGIA - Emergence continues heavy in southern area; overwintered weevils feeding on cotton terminals in northern area. (Womack). ALABAMA - Large numbers of overwintered weevils continue to emerge throughout State. Square infestation on fully fruiting cotton ranged 37-66 percent in Tallapoosa, Coffee, and Barbour Counties. Percent infestation ranged 33-56 in Dallas County. Infestation in fully fruiting cotton on one farm in Montgomery County ranged 21-41 percent; ranged 10-43 percent on younger cotton with fewer squares per stalk on other farms in county. Weevils heavy in 9 Perry County fields; infestation 18-76 percent. Square infestation ranged 20-30 percent in Elmore County. Infestation ranged 18-28 percent in Colbert County field with numerous half-grown squares; few 3 to 5-day-old larvae observed in older squares in this field. First-generation "hatchout: in older fields of central and southern areas expected June 20-25 and of northern area July 1-6; but "hatchout" not expected until 18-20 days after egg laying occurs in squares yet to be formed. Numerous live weevils present in all fields examined in Colbert and Madison Counties; cotton in most fields 2 to 6-leaf stage. (Ledbetter et al.). MISSISSIPPI - Overwintered weevils moved into several fields in Yazoo County. In older cotton with squares, egg punctures noted. Percent punctured squares averaged 4 in one field, 2 in another field. In several fields in which cotton not squaring, live weevils taken with vacuum sweeper. (Dinkins). Overwintered weevils found in 5 of 56 fields, mostly presquaring or early squaring, in delta counties; ranged 50-125 per acre. Numbers appeared lower than previous week. (Pfrimmer et al.). LOUISIANA - Overwintered weevils found in 6 of 23 fields in Madison Parish. Ranged 26-286 per acre; averaged 6.5 per acre for all fields. Total of 26 weevils found in 20 of 65 fields checked for square infestation; punctures found in all fields. Percent punctured squares ranged 5-29 (average 17) in all fields. (Cleveland et al.). TEXAS - Weevils found in 14 of 17 untreated fields and in 5 of 27 treated fields in Waco area. Averaged 178 (maximum 300) per acre in untreated fields and 40 (maximum 212) in treated fields. Overall average of 103 compares with 5 during corresponding week in 1966. Percent punctured squares averaged 3.8 (range 0-7.4) in 9 treated fields and averaged 17.1 (range 16.7-17.6) in 2 untreated fields; these in fields with sufficient squares to make counts. No weevils collected on flight screens. (Cowan et al.).

BOLLWORMS (Heliothis spp.) - SOUTH CAROLINA - Total of 9 H. zea and 3 H. virescens taken in light trap at Florence. (Taft et al., June 14). GEORGIA - Averaged 3 eggs and one small larva per 100 terminals in southern area. (Womack). ALABAMA - Egg laying common, with 2-10 per 100 terminals reported on 7 farms in Montgomery County; eggs 0-22 per hundred terminals in Dallas County. Very few eggs observed in cotton in northern area. Larvae extremely light. (Wilder et al.). MISSISSIPPI - Infestations appearing in older cotton in Yazoo and in other counties in this region. Larvae per 100 terminals averaged 7 in one field, 4 in another field. All larvae first and second instars and feeding in terminals. Younger cotton not infested. (Dinkins). Eggs found in 44 of 56 fields in delta counties. Averaged 675 (range 0-2,550) per acre, based on number of row feet checked in each field. Single H. zea larva found in each of 3 fields. (Pfrimmer et al.). LOUISIANA - Damaged squares ranged 1-5 (average 2) percent in 63 of 65 fields in Madison Parish. Larvae ranged 1-3 per 100 squares in 32 fields. Terminal counts made in 18 fields; eggs ranged 1-13 (average 4) per 100 terminals in 14 fields; larvae ranged 1-6 (average 3) per 100 terminals in 13 fields. Total of 23 H. zea and 2 H. virescens moths taken in light trap. (Cleveland et al.). TEXAS - Generally light in Waco area, although heavy infestation found in one field. Averaged 0.9 egg and 0.8 larva per 100 terminals in 36 treated fields. Averaged 0.4 egg and 0.4 larva per 100 terminals in 15 untreated fields. Percent damaged squares

averaged 3.3 in 9 treated fields, and 1.1 in 2 untreated fields. (Cowan et al.). ARIZONA - H. zea numbers appear moderate to heavy in areas of Maricopa, Pinal, and Yuma Counties. Larvae averaged 20 per 100 plants in more heavily infested fields; however, predation heavy in most fields. (Ariz. Coop. Sur.).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - ALABAMA - More larvae reported in northern area fields than usual. Ranged 15-20 per 600 feet of row in few Madison County fields. No infestation yet requires control. (McQueen).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Few small, but light infestations found, particularly in Queen Creek and Buckeye areas of Maricopa County. (Ariz. Coop. Sur.). NEW MEXICO - Larvae, probably this species, light with scattered feeding on cotton foliage in Dona Ana County. (Campbell).

THRIPS - SOUTH CAROLINA - Widespread in Orangeburg County. Severe injury noted in one field where plants 6 inches tall and averaged 2 leaves per stalk in Abbeville County. (Nettles et al., June 6). Continue problem in some fields in Florence area. (Taft et al., June 14). TENNESSEE - Continue problem on late-planted cotton in western area; range light to heavy. (Locke). GEORGIA - Damage heavy to seedling cotton in Bartow and Walton Counties (Womack); continue moderate on seedling cotton in Spalding County (Beckham). ALABAMA - Adults and nymphs, mostly Frankliniella fusca, heavy on 1 to 4-leaf cotton not treated in Colbert, Madison, and other northern counties; 2-10 small nymphs common inside leaf bud of each plant. Lateness of cotton and heavy migration of thrips into these fields, as well as damage, causing many growers to apply controls. (McQueen). MISSISSIPPI - F. fusca infestations declined in delta county area. (Pfrimmer et al.). ARKANSAS - Thrips infestations reported in east and southwest areas; spotty and locally heavy. Numbers low to as high as 25-50 per plant. Much cotton very late and susceptible to injury. Large acreages of late cotton being treated. (Ark. Ins. Sur.). MISSOURI - Heavy; damaged seedlings in southeast area. Averaged 120 per plant in plots on research station at Portageville. Much of cotton in southeast area treated. (Harrendorf, Jones). TEXAS - Heavy in one, medium in one, and light in 5 of 7 untreated fields in Waco area; light in 13 and medium in one of 20 treated fields. (Cowan et al.). NEW MEXICO - Damage minor in Dona Ana County cotton. (Campbell). NEVADA - Leaf distortion evident in parts of some fields in Pahrump Valley, Nye County. Cotton later than normal; no controls applied to date. (Gallaway, Zoller). CALIFORNIA - Damaging some cotton replanted in early June in Fresno County. (Cal. Coop. Rpt.).

APHIDS - SOUTH CAROLINA - Widespread in Orangeburg County. (Nettles et al., June 6). NEW MEXICO - Aphis gossypii light, spotty in most Dona Ana County cotton. (Campbell). CALIFORNIA - Some dusting for aphids underway on more advanced cotton in Fresno County. (Cal. Coop. Rpt.).

TARNISHED PLANT BUG (Lygus lineolaris) - LOUISIANA - Averaged 8 per 100 sweeps in 30 fields in Madison Parish. (Cleveland et al.). MISSISSIPPI - Found in 9 of 16 fields in delta counties. Averaged 229 (range 0-806) per acre. (Pfrimmer et al.).

LYGUS BUGS (Lygus spp.) - ARIZONA - Continue much below normal. Only occasional economic infestation found in Maricopa and Pinal Counties. (Ariz. Coop. Sur.).

FLEAHOPPERS - TEXAS - Psallus seriatus remained low in Waco area, although some increase noted. Averaged 0.9 (range 0-8.5) per 100 terminals in 36 treated fields; averaged 3 (range 0-11.4) per 100 terminals in 15 untreated fields. (Cowan et al.). LOUISIANA - Fleahoppers averaged 0.25 per 100 sweeps in 30 fields checked in Madison Parish. (Cleveland et al.). MISSISSIPPI - P. seriatus increased in Yazoo County cotton. Approximately 15-30 per 1,000 feet of row taken with vacuum sweeper. Very little square damage evident. (Dinkins).

TOBACCO

GREEN PEACH APHID (Myzus persicae) - MARYLAND - Populations considerably above normal in tobacco fields in southern area. (U. Md., Ent. Dept.). VIRGINIA - Could be problem on tobacco in Pittsylvania County if warm weather continues. (Dominick, Isakson).

FLEA BEETLES - WISCONSIN - One tobacco seed bed in Dane County treated specifically for this pest. (Wis. Ins. Sur.). MARYLAND - Epitrix hirtipennis adults averaged 4 per plant on newly set tobacco in Anne Arundel County. (U. Md., Ent. Dept.).

SUGARBEETS

FLEA BEETLES - NEW YORK - Not as severe as May 30-June 5; good weather aided growth of sugarbeets. (N. Y. Wkly. Rpt., June 12).

SPINACH LEAF MINER (Pegomyia hyoscyami) - COLORADO - Probably this species, causing much foliage damage on sugarbeets in Johnstown, Eaton, and Ault areas of Weld County. (Marostica et al.).

MISCELLANEOUS FIELD CROPS

A JUNE BEETLE (Phyllophaga sp.) - TEXAS - Moderate in Russian sunflower plantings near Levelland, Hockley County. Adults girdling stalks and causing much lodging. (Hanson).

SUNFLOWER MOTH (Homoeosoma electellum) - TEXAS - From several to several hundred small larvae infesting fields of sunflower in Brazos and McLennan Counties. Feeding in heads and consuming seed. (Teetes).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Light numbers migrating near safflower fields in Maricopa and Graham Counties. (Ariz. Coop. Sur.).

ALFALFA LOOPER (Autographa californica) - OREGON - Half-grown larvae averaged 1-3 per 50 sweeps (same as last week) in mint fields in high plains area of Jefferson County; in Brooks, Woodburn, and Buena Vista areas of Marion County; and in Corvallis area of Benton County. None found in mint fields at lower elevations in Jefferson County. (Morrison).

GREAT BASIN WIREWORM (Ctenicera pruinina) - OREGON - Larvae light on mint roots in Madras area of Jefferson County. It is not known if they are causing damage at this time. This species caused economic damage in 1950 to potatoes in same area. (Morrison).

GREEN PEACH APHID (Myzus persicae) - CALIFORNIA - This species and Macrosiphum euphorbiae medium on hop plantings generally in Yuba City area, Sutter County. (Cal. Coop. Rpt.).

POTATOES, TOMATOES, PEPPERS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - NEW HAMPSHIRE - Adults active on potatoes at Durham June 4. (Sutherland). MASSACHUSETTS - Very abundant on most potato plantings. Heavy feeding noticeable on rapidly growing plants in Hadley area June 10. Eggs very heavy on most plants. Early control advisable to prevent large larval populations. (Crop Pest Cont. Mess., June 12). DELAWARE - Adults, eggs, and larvae very common on tomatoes and some potatoes in several areas of State. (Burbutis). VIRGINIA - Many spring-brood larvae completed growth and left potato plants. Should present dry weather and high temperatures continue, adult emergence may be delayed on Eastern Shore. (Hofmaster). UTAH - Eggs

numerous in Weber and northern Davis County potato and tomato fields. No larvae observed to June 13. (Knowlton).

POTATO FLEA BEETLE (Epitrix cucumeris) - VIRGINIA - Appearance of first-brood adults on Eastern Shore anticipated to be later than usual; should appear about June 20 or later. (Hofmaster). DELAWARE - Damage to potatoes in Kent County heavy along edges of some fields. (Burbutis). MAINE - Numbers and damage light to tomato foliage in home gardens in Washington County. (Boulanger, June 9).

POTATO APHID (Macrosiphum euphorbiae) - NEW JERSEY - Very abundant on tomatoes throughout State. (Ins.-Dis. Newsltr.). TEXAS - Heavy numbers causing serious damage to tomato fields near De Kalb, Bowie County. Aphids clustering about on leaves, stems, and blossoms. (Lynch). VIRGINIA - Reported on tomatoes on the Eastern Shore. (Hofmaster).

GREEN PEACH APHID (Myzus persicae) - OREGON - Showing up on potato leaves in Marion and Jefferson Counties. (Every). NEW JERSEY - Light on peppers near Mullica Hill. Very light on tomatoes. (Ins.-Dis. Newsltr.).

SPIDER MITES (Tetranychus spp.) - ALABAMA - Caused some discoloration and light damage to first 3 rows adjoining field border in commercial tomato planting on Chandler Mountain, St. Clair County; 15-200 mites with hundreds of eggs per leaf on 2-foot high plants. Mites migrated from heavy growth of hairy vetch along field border. (McQueen). Probably T. cinnabarinus, heavy, with several hundred per leaf destroying an entire home planting of tomatoes in Coffee County. Numbers extremely heavy on stems of plants from ground up. (Speed). CALIFORNIA - T. marianae heavy on tomatoes in Yorba Linda, Orange County. Research indicates this pest capable of explosive buildup and rapid kill. Movement from wild and ornamental solanaceous hosts threatening tomato fields in southern part of State. (Cal. Coop. Rpt.).

BEANS AND PEAS

PEA APHID (Acyrthosiphon pisum) - DELAWARE - Building up on peas in eastern Kent County. (Burbutis). WISCONSIN - Decreased in pea fields, with 4 per 10 sweeps unusually high. Trace numbers in most fields. (Wis. Ins. Sur.).

BEAN APHID (Aphis fabae) - DELAWARE - Very common on snap beans in one area of Sussex County. (Burbutis). MARYLAND - Heavy on lima beans near Graysonville, Queen Annes County. (U. Md., Ent. Dept.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - COLORADO - Adult caught in flight at Fort Collins, Larimer County. Migration to bean fields will occur soon. Trace numbers found in Windsor area, Weld County. (Thatcher, Colette).

THRIPS - DELAWARE - Abundant on some peas in Sussex and Kent Counties. (Burbutis).

SEED-CORN MAGGOT (Hylemya platura) - OREGON - Caused some damage to pole beans in early spring in some Marion County fields. (Every).

COLE CROPS

IMPORTED CABBAGEWORM (Pieris rapae) - NEW YORK - Very active in most cabbage in Orleans, Genesse, and Niagara Counties. Few in Monroe County. (N. Y. Wkly. Rpt., June 12). MISSOURI - Fed on broccoli in southeast area. (DiCarlo).

CABBAGE APHID (Brevicoryne brassicae) - TEXAS - Heavy on rape plantings near Levelland, Hockley County. All stages present with up to 20 per flower tip in some instances. (Hanson).

CABBAGE MAGGOT (Hylemya brassicae) - MASSACHUSETTS - Numerous in many plantings. (Crop Pest Cont. Mess., June 12).

POTATO FLEA BEETLE (Epitrix cucumeris) - MAINE - Numers and damage light to turnip foliage in Washington County. (Boulanger, June 9).

CUCURBITS

STRIPED CUCUMBER BEETLE (Acalymma vittatum) - DELAWARE - Adults causing some injury to cucumbers in Sussex and New Castle Counties; abundant in blacklight trap collections in Sussex County. (Burbutis). MASSACHUSETTS - Becoming active; will require control to prevent bacterial wilt. (Crop Pest Cont. Mess., June 12).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardii) - OKLAHOMA - Averaged 2 per cucumber plant in Payne County. (Okla. Coop. Sur.).

POTATO FLEA BEETLE (Epitrix cucumeris) - MAINE - Numbers and damage light on cucumbers and melons at Newport, Penobscot County. (Boulanger, June 9).

SQUASH BUG (Anasa tristis) - OKLAHOMA - Ranged 3-4 per hill on squash and pumpkins in Payne County. (Okla. Coop. Sur.).

GENERAL VEGETABLES

ASPARAGUS BEETLE (Crioceris asparagi) - NEW HAMPSHIRE - Adults numerous at Kensington and Salem June 6. (Sutherland). VERMONT - Prevalent. (MacCollom, June 12). NEW YORK - Active in Monroe County. (N. Y. Wkly. Rpt., June 12). RHODE ISLAND - Adults very heavy in commercial asparagus planting in East Greenwich, Kent County. (Mathewson, June 9). WISCONSIN - Adults in some southern area asparagus plants. (Wis. Ins. Sur.).

SPOTTED ASPARAGUS BEETLE (Crioceris duodecimpunctata) - RHODE ISLAND - Adults very heavy in commercial asparagus planting in East Greenwich, Kent County. (Mathewson, June 9). NEW HAMPSHIRE - Adults numerous at Kensington and Salem June 6. (Sutherland).

CARROT BEETLE (Bothynus gibbosus) - MARYLAND - Heavy in carrot planting near Centreville, Queen Annes County. Adults very heavy in blacklight trap at same location. (U. Md., Ent. Dept.).

GREEN PEACH APHID (Myzus persicae) - NEW YORK - In unprotected Orange County lettuce fields June 5; none in fields with weekly spray schedule. (N. Y. Wkly. Rpt.).

THRIPS - MISSOURI - Damaged various vegetables in southeast area. (DiCarlo).

CABBAGE MAGGOT (Hylemya brassicae) - NEW YORK - Widespread across State. Control poor with either chlorinated-hydrocarbons or organo-phosphates in some areas; control good in other areas. Egg laying continues. (N. Y. Wkly. Rpt., June 12).

ONION MAGGOT (Hylemya antiqua) - OREGON - Damaged untreated onions June 6 at Lake Labish, Marion County. (Crowell).

GRAY GARDEN SLUG (Deroceras reticulatum) - PENNSYLVANIA - Slugs, principally this species, caused large amount of damage to young vegetable plants; defoliated pepper transplants at several central area locations. (Gesell).

Continued from page 531.

BLACK CUTWORM (Agrotis ipsilon) - MISSOURI - Moderate to heavy in few widely scattered corn fields in northeast. Heavy, destroyed all small corn plants in Shelby County field. (Munson). ILLINOIS - Occasional damage in scattered areas. (Kuhlman). INDIANA - This and other cutworms caused widespread damage throughout State, but most serious in west-central area. (Lehker). OHIO - This and other cutworms damaged corn in 14 counties. (Blair et al.). Damage to corn in Wayne County heavy, up to 90 percent. (Glass, Barry). Late instars damaged corn in central area. (Miller). MARYLAND - Several heavy infestations found are young corn in western Talbot County. Some replanting and controls necessary. Also damaging corn in Calvert, Queen Annes, and Saint Marys Counties. (U. Md., Ent. Dept.).

DECIDUOUS FRUITS AND NUTS

CODLING MOTH (Carpocapsa pomonella) - MASSACHUSETTS - Active; earliest laid eggs will hatch soon. (Crop Pest. Cont. Mess., June 12). NEW YORK - Emergence very heavy June 10-11 in Monroe County. (N. Y. Wkly. Rpt.). NEW JERSEY - Emerging from overwintering cocoons in central and southern counties. (Ins.-Dis. Newsltr.). MARYLAND - Moth emergence from overwintered material passed peak at Hancock. First-generation eggs hatching; some small larvae found in unsprayed orchards. (U. Md., Ent. Dept.). WISCONSIN - Moths in blacklight traps at Platteville and Madison. (Wis. Ins. Sur.). - COLORADO - Sporadically collected in attractant traps in Delta, Mesa, and Montrose Counties; nearing end of first brood. (Bulla).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - COLORADO - Late instars heavily damaged 50 percent of young peach terminals in some Mesa County orchards. (Sisson). NEW JERSEY - Larvae flagging peach terminals in unsprayed blocks in southern and central counties. (Ins.-Dis. Newsltr.).

GREEN FRUITWORM (Lithophane antennata) - MAINE - Numbers and damage light in several areas throughout State. (Boulanger, June 9). VERMONT - Troublesome in some areas. (MacCollom, June 12).

CLIMBING CUTWORMS - VERMONT - Numbers and injury increased on fruit trees for third consecutive year. Control effective with achlorinated hydrocarbon appled to trunks and orchard cover at prebloom. (MacCollom, June 12).

CANKERWORMS - CONNECTICUT - Problem at Southington and Storrs. (Savos, June 14). NEW JERSEY - Numbers high throughout State. (Ins.-Dis. Newsltr.). NEW YORK - Alsophila pometaria larvae unusually high in most areas; numerous in apple orchards in western area, in Hudson Valley, and in Ithaca area. (N. Y. Wkly. Rpt., June 12).

LEAF ROLLER MOTHS - NEW JERSEY - Larval numbers high throughout State. (Ins.-Dis. Newsltr.). Archips argyrospilus larval problem chemically controlled; larvae damaged fruit in unsprayed orchards. (Savos, June 14).

LESSER PEACH TREE BORER (Synanthedon pictipes) - NEW JERSEY - Moth emergence increased June 7-14; peak emergence probably will occur in early July. (Ins.-Dis. Newsltr.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - UTAH - Common in apple orchards in Utah, Davis, Salt Lake, and Box Elder Counties. (Davis) NEW MEXICO - Widespread, light to heavy in bark wounds and cracks of apple trees in Farmington area, San Juan County (Heninger); on apple nursery stock in Dona Ana County (Elson). TEXAS - Moderate on apple trees near Memphis, Hall County. (Boring). ALABAMA - Heavy on apple trees and root systems in Blount and Cullman Counties. (Leeper et al.). GEORGIA - Damaging apple tree roots in Butts County. (Brack).

APPLE APHID (Aphis pomi) - MAINE - Numbers increasing; damage negligible to date. (Boulanger, June 9). CONNECTICUT - Building up and will be problem in many orchards soon. (Savos, June 14).

BLACK CHERRY APHID (Myzus cerasi) - UTAH - Very numerous; severly curled sweet cherry foliage at Brigham City, Box Elder County, and black sweet cherry at Murray, Salt Lake County. Some areas sprayed 10 days ago severly infested again. (Knowlton). COLORADO - Very high on cherries in Fort Collins area, Larimer County; 5 percent of leaves curled. Controls recommended. (Thatcher, Drage).

APHIDS - WASHINGTON - Anuraphis helichrysi heavy in Wenatchee areas on prunes. (Anthon). OREGON - A. helichrysi and Phorodon humili damaged prune leaves in Polk County week of June 30. (Every).

GREEN PEACH APHID (Myzus persicae) - COLORADO - Very heavy in some unsprayed peach orchards in Mesa and Delta Counties. Mostly alates leaving stone fruits for summer hosts. (Sisson, Bulla).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - FLORIDA - All stages moderate to severe in stems of 25 of 30 peach nursery plants at Miami, Dade County. (Sloan, June 8).

PLUM CURCULIO (Conotrachelus nenuphar) - NEW HAMPSHIRE - Adults active, egg punctures on cherry and apple at Exeter and Hollis June 7. (Sutherland). VERMONT - Warm weather and fruit size suitable for curculio attack. (MacCollom, June 12). CONNECTICUT - Activity still light; unsprayed orchards do not show many feeding or egg-laying scars. Trees should be protected at least to June 24. (Savos, June 14). OKLAHOMA - Moderate to heavy on native plums in Woodward and Major Counties. (Okla. Coop. Sur.).

CHERRY FRUIT FLIES (Rhagoletis spp.) - PENNSYLVANIA - R. cingulata adults emerging from Erie County and northeast area cherry June 12. (Cox). NEW YORK - R. cingulata June 10 in Spencerport area. First R. fausta adult at Geneva June 6; steady, heavy emergence since. (N. Y. Wkly. Rpt.). OHIO - First R. fausta adults in Lake County June 9; emergence heavy to June 15. (Still).

PEAR-SLUG (Caliroa cerasi) - COLORADO - Adults depositing eggs on cherry leaves in Fort Collins area, Larimer County; 4-22 per 10-inch branch, 3-5 per leaf. (Thatcher).

EUROPEAN APPLE SAWFLY (Hoplocampa testudinea) - CONNECTICUT - Damage by second and third instars noticeable on check trees. (Savos, June 14).

EUROPEAN RED MITE (Panonychus ulmi) - MAINE - Development strong. Adults and summer eggs at Kents Hill, Kennebec County, June 9; should hatch by June 16 with continued warmth. (Boulanger). NEW HAMPSHIRE - First eggs of season at Hollis June 7. (Sutherland). MASSACHUSETTS - Some summer eggs hatched. (Crop Pest Cont. Mess., June 12). CONNECTICUT - Numbers down in most areas but should increase. (Savos, June 14). NEW YORK - Summer eggs laid June 6 and 7 throughout State. Adults and numerous eggs June 5 on young nonbearing Red Delicious in Clinton County; heavy in some fruit orchards in Monroe and Clinton Counties. (N. Y. Wkly. Rpt.). NEW JERSEY - Very scarce in well-managed blocks throughout State. (Ins.-Dis. Newsltr.). MISSOURI - Building up on southeast area apples. (Wkly. Rpt. Fr. Grs.).

ERIOPHYID MITES - COLORADO - Eriophyes pyri in Bartlett pear orchards in Palisade area, Mesa County. Not economic yet. (Bulla). NEW YORK - Aculus schlechtendali on apple leaves in Clinton County. (N. Y. Wkly. Rpt., June 12).

FALL WEBWORM (Hyphantria cunea) - NEW MEXICO - Larvae appearing in some nut trees in Mesilla Valley. (Campbell).

SPITTLEBUGS - GEORGIA - Heavy on pecan trees in Emanuel County. (Varner).

BLACK-MARGINED APHID (Monellia costalis) - NEW MEXICO - Increasing on untreated pecan trees in Mesilla Valley; honeydew becoming very evident. (Campbell).

EUROPEAN EARWIG (Forficula auricularia) - CALIFORNIA - Adults heavy in English walnut trees in Chino, San Bernardino County; spreading into many locations. (Cal. Coop. Rpt.).

CITRUS

AN ARMORED SCALE (Unaspis citri) - FLORIDA - Special survey continues; several thousand citrus nursery trees inspected. Infestation heaviest in area of Orange, Lake, and neighboring counties; ranged very light to heavy in individual nurseries. (Fla. Coop. Sur.). At Bithlo, Orange County, 500 nursery citrus trees quarantined because of infestations. (Crews).

SMALL FRUITS

BLACK-HEADED FIREWORM (Rhopobota naevana) - MASSACHUSETTS - Larvae just hatching, webbing new terminal growth of cranberries at East Wareham, Plymouth County. (Tomlinson, June 9).

CHERRY FRUITWORM (Grapholitha packardi) - OHIO - Adults emerged June 12 in blueberry plantings in Ashtabula County. (Still).

CRANBERRY FRUITWORM (Acrobasis vaccinii) - NEW JERSEY - Entering blueberries in untreated fields. Egg counts increased from 11 to 38 per 100 clusters June 9-12 in one field; larvae entering berries increased from 1 to 17. (Ins.-Dis. Newsltr.).

CURRANT SPANWORM (Itame ribearia) - NORTH DAKOTA - Heavy larval numbers severely damaged currant at Fargo. (Frye).

WESTERN GRAPE LEAF SKELETONIZER (Harrisina brillians) - ARIZONA - Heavy, damaged backyard grape plantings and abandoned commercial vineyards in Maricopa and Pinal Counties. (Ariz. Coop. Sur.).

GRAPE FLEA BEETLE (Altica chalybea) - ARIZONA - Moderate in many commercial vineyards in areas of western Maricopa County; damage light to moderate. (Ariz. Coop. Sur.).

RASPBERRY CANE BORER (Oberea bimaculata) - OHIO - Infested some raspberry canes in Muskingum County. (Knotts, Miller).

GRAY GARDEN SLUG (Deroceras reticulatum) - PENNSYLVANIA - Slugs, mainly this species, damaged 10-30 percent of ripe strawberries at several locations. (Gesell).

CURRANT APHID (Cryptomyzus ribis) - UTAH - Curled red currant foliage at Bountiful, Davis County. (Knowlton).

IMPORTED CURRANTWORM (Nematus ribesii) - NORTH DAKOTA - Larval damage moderate on gooseberry at Fargo. (Frye).

BLUEBERRY THRIPS (Frankliniella vaccinii) - MAINE - Leaf rolling substantial on newly emerging shoots June 6 at Sedgwick, Hancock County. (Boulanger).

TWO-SPOTTED SPIDER MITE (Tetranychus urticae) - OREGON - Building up on strawberries in Willamette Valley area. (Every).

ORNAMENTALS

BAGWORM (Thyridopteryx ephemeraeformis) - GEORGIA - Heavy on junipers in Monroe County. (Self, Williams). DELAWARE - Hatching; small new bags on variety of trees in Sussex and Kent Counties. (Burbutis). OHIO - First larvae of season and some feeding on juniper June 1 in Green County. (Kennedy).

MIMOSA WEBWORM (Homadaula albizziae) - OHIO - First adults of season May 25. (Peacock, Galford). ALABAMA - Some first and second instars of first generation on isolated mimosas in Madison and other northern counties. Much feeding and webbing by older first-generation larvae on isolated trees in central area. (Hood et al.).

ARBORVITAE LEAF MINER (Argyresthia thuiella) - OHIO - Infested 90 percent of 200 arborvitae trees in Summit County; adults expected soon. (Kelly, June 6).

BLACK VINE WEEVIL (Brachyrhinus sulcatus) - OHIO - Pupation underway over State; 100 percent in Montgomery County (Kennedy); ranged 0 to more than 90 percent in 3 Lake County yew plantings. (Walker, Campbell). First adults of season in Cuyahoga (Wells) and Lake Counties June 13. Adults 12 percent of population in Lake County; pupae still predominate. (Campbell).

SOFT SCALES - FLORIDA - All stages of Saissetia nigra moderate to severe on stems of 25 percent of 300 hibiscus plants at nursery in Miami, Dade County. (Sloan, June 8). CALIFORNIA - Lecanium corni complex heavy on pyracantha at Biggs, Butte County; medium on viburnum in Visalia, Tulare County. (Cal. Coop. Rpt.).

GREENHOUSE ORTHEZIA (Orthezia insignis) - FLORIDA - Moderate to severe on stems and leaves of 500 Texas silverleaf, Leucophyllum frutescens, at nursery in Miami Dade County. (Sloan, June 8).

OYSTERSHELL SCALE (Lepidosaphes ulmi) - NEW JERSEY - Crawlers active. (Ins.-Dis. Newltr.).

FOREST AND SHADE TREES

FOREST TENT CATERPILLAR (Malacosoma disstria) - VERMONT - Larvae large and troublesome. (MacCollom, June 12). VIRGINIA - Larvae numerous on cabins at Shenandoah farms, Clarke County; had fed on nearby oak trees. (Isakson, Boyner). MINNESTOA - Light at Baudette. Averaged 1.5-2.0 inches long; through feeding in about 7 days. (Minn. Ins. Rpt.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - MAINE - Light in most areas of State. (Boulanger, June 9). VERMONT - Building up again. (MacCollom, June 12).

TORTRICID MOTHS - WISCONSIN - Third instars of Choristoneura pinus in Jackson County. (Wis. Ins. Sur.). MAINE - Fourth instars of C. fumiferana in Aroostook County. (Boulanger, June 9). OREGON - Cacaecimorpha pronubana larvae severely damaged leaves of Portugal-laurel in areas of Portland, Multnomah County, during April. (Every). RHODE ISLAND - Rhyaciona buoliana larvae infest candles in East Providence, Providence County. (Hartley, June 8).

CANKERWORMS - WISCONSIN - Heavy on elm, oak, and apple east of Wautoma, Waushara County. Larvae about ready to pupate. Infestations should decline rapidly in about 7 days. (Wis. Ins. Sur.). NEW YORK - Alsophila pometaria larvae unusually high in most areas; heaviest on shade and forest trees. (N. Y. Wkly. Rpt., June 12).

CALIFORNIA OAKWORM (Phryganidia californica) - CALIFORNIA - Full-grown larvae seeking pupation sites in Sonoma County. Defoliation of oak trees not as severe as at this time last year. (R. Hunt, CDF).

ELM LEAF BEETLE (Pyrrhalta luteola) - OREGON - Hatched on elms at Corvallis, Benton County. (Every). NEVADA - Adults, eggs, and larvae at Henderson, Clark County. (Nichols). NEW MEXICO - Averaged 5-10 larvae per 12 leaves on Siberian elm at Farmington, San Juan County. (Heninger, Kloepfer). OKLAHOMA - First generation pupated in Payne County; last instars in Major County. (Okla. Coop. Sur.). SOUTH CAROLINA - First damage of season evident in Clemson area. (Nettles et al., June 6). OHIO - Larvae of all sizes of first generation feeding on Chinese elm in Franklin County; leaf skeletonization to date not severe. (Rose). NEW JERSEY - Common on elm throughout State. (Ins.-Dis. Newsltr.). RHODE ISLAND - Adults feeding; some oviposition evident statewide. (Mathewson, Hartley, June 9).

IMPORTED WILLOW LEAF BEETLE (Plagiodera versicolora) - RHODE ISLAND - Adults more numerous on willows at Kingston and Saunderstown, Washington Counties. (Mathewson, Colodney, June 8).

WESTERN PINE BEETLE (Dendroctonus brevicomis) - CALIFORNIA - Killed more than 250 ponderosa pine trees in 3,000-acre stand in Tuolumne County on Stanislaus National Forest and on adjacent private lands. Heaviest damage in group kills between Sierra Village and Tuolumne City. (R. Kielhorn, USFS).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - OKLAHOMA - First-generation adults began emergence June 13 in Stillwater area, Payne County. (Okla. Coop. Sur.).

BRONZE BIRCH BORER (Agrilus anxius) - DELAWARE - Adults emerging from infested gray birch trees in New Castle County; apparently heavy in many trees. (Bray).

A WEEVIL (Hypomolyx piceus) - VERMONT - Attacked recently cut conifer stumps. Large numbers can threaten adjacent trees in dry weather. (MacCollom, June 5).

RED TURPENTINE BEETLE (Dendroctonus valens) - VERMONT - Attacked recently cut conifer stumps. Large numbers can threaten adjacent trees in dry weather. (MacCollom, June 5).

ARMORED SCALES - RHODE ISLAND - Phenacaspis pinifoliae hatched and moved to needles at Kingston, Washington County. (Mathewson, Novak, June 8). OHIO - Diaspis carueli infested juniper in Darke and Marion Counties. (Kuester et al.). WISCONSIN - About 80 percent of P. pinifoliae crawlers exposed; rest under scales in Dane County. (Wis. Ins. Sur.). FLORIDA - All stages of Diaspidiotus liquidambaris moderate on 80 percent of 100 sweetgum trees in nursery at Groveland, Lake County. (Henderson, June 9).

SPRUCE GALL APHIDS (Adelges spp.) - OHIO - A. cooleyi eggs 6-24 per cottony mass on 10 acres of Douglas-fir Christmas trees in Columbiana County. (Campbell, June 9). RHODE ISLAND - A. abietis formied new galls. (Hartley, June 8).

EUROPEAN ELM SCALE (Gossyparia spuria) - CALIFORNIA - Medium in street plantings of Zelkova trees in Biggs, Butte County. (Cal. Coop. Rpt.). NEBRASKA - Heavy in Sheridan County. (Peters).

SOFT SCALES - MINNESOTA - Toumeyella numismaticum beginning to hatch. (Minn. Ins. Rpt.). WISCONSIN - Lecanium fletcheri egg laying completed on Dane County arbovitae June 14. (Wis. Ins. Sur.).

APHIDS - UTAH - Pemphigus populiramulorum developing in Ogden and Slaterville area of Weber County. (Knowlton). OHIO - Euceraphis betulae heavy on 3-acre planting of birch in Lake County. (Campbell).

HICKORY BARK BEETLE (Scolytus quadrispinosus) - MARYLAND - Infesting 2 young hickory trees near Forest Heights, Prince Georges County. This beetle unusual in State. (U. Md., Ent. Dept.).

GALL MIDGES (Dasineura spp.) - NEW HAMPSHIRE -Honeylocust leaflets galled by D. gleditchiae larvae at Durham, Strafford County, June 5. (Sutherland). D. balsamicola first adults May 29. Numerous adults ovipositing at Franconia Grafton County, June 1. (Conklin et al.).

MAN AND ANIMALS

MOSQUITOES - VERMONT - Particularly annoying in all areas. (MacCollom, June 12). RHODE ISLAND - Heavy throughout State. (Mathewson, June 9). CONNECTICUT - Abundant and annoying. (Savos). WISCONSIN - Annoying cattle in Price and Rusk Counties. Becoming numerous, especially in northern lake regions. (Wis. Ins. Sur.). MINNESOTA - Of 880 larval collections for week ending June 10, Aedes vexans in 198 and Culiseta inornata in 118. In bite collections, Aedes abserratus, A. stimulans, A. fitchii and A. excrucians predominated. Light trap collections mostly A. abserratus. Rain totaling 5-6 inches June 4-15 resulted in largest broods of A. vexans in several years; fourth instar present. By last week of June, adults will be generally very high throughout State. (Minn. Ins. Rpt.). NEBRASKA - Increasing rapidly in eastern area following prolonged, heavy rains. Biting severe in Lincoln, Lancaster County. Aedes vexans abundant. (Raun). UTAH - Troublesome over much of Deseret, Delta, and Sutherland areas of Millard County. (Knowlton). NEVADA - Culex tarsalis larvae medium, adults present in Las Vegas area, Clark County. (Milner).

CATTLE GRUBS (Hypoderma spp.) - UTAH - Adults annoying cattle in several Sevier County localities. (Knowlton, Rickenbach). WISCONSIN - Survey conducted February 13 through June 6. Total of 56 counties found infested. Grubs per animal averaged 0-1.7 in 38 counties, 2-5 in 17 counties, and 17.6 in 8 Eau Claire County herds. (Wis. Ins. Sur.). NEBRASKA - H. bovis adults running cattle in Hooker County. (Raun, June 7).

SCREW-WORM (Cochliomyia hominivorax) - Total of 7 cases reported in U. S. June 11-17 as followes: TEXAS - Terrell 3, Bexar 1; ARIZONA - Maricopa 3. Total of 62 cases reported in portion of Barrier Zone in Republic of Mexico June 4-10 as follows: Territorio sur de Baja California 12, Sonora 14, Chihuahua 8, Coahuila 3, Nuevo Leon 3, Tamaulipas 22. Total of 11 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U. S. Sterile flies released June 11-17: Texas 33,778,000; Arizona 1,720,000; Mexico 124,300,000. (Anim. Health Div.).

HORN FLY (Haematobia irritans) - UTAH - Becoming common on cattle, but not generally numerous in central and northern area. (Knowlton). NORTH DAKOTA - Up to 300 per head (average 120) on Cass County beef cattle. (Brandvik). SOUTH DAKOTA - On Holstein herd in Moody County counts 30-50 per side on dark cattle, much less on predominantly white ones. (Balsbaugh, McDaniel). East of Hermosa, Custer County, up to 500 flies per side on bulls; east of Buffalo Gap, 100-200 per side on large herds of two-year-old steers. (Kantack). NEBRASKA Ranged 0-20 per head on Hereford cattle in Thomas and Hooker Counties; ranged 1-15 per head on Angus cattle in Sheridan County. (Raun, June 7). OKLAHOMA - Averaged 1,200 per head on yearlings and 3,000 per head on bulls in Payne County; ranged 800-1,000 per head on cows in Major and Woodward Counties. Heavy in Mayes County; moderate in Marshall County. (Okla. Coop. Sur.). MISSISSIPPI - Average counts per head by county as follows: Pike 30 on 40 cattle; Montgomery 150 on 450 animals; Tate 150 on 70 animals; Washington 30 on 200 animals. (Dinkins). GEORGIA - Up to 1,000 per head of beef cattle in Hancock County. (Nolan). NEW JERSEY - Continues to increase rapidly throughout State. Controls recommended for dairy cattle. (Ins.-Dis. Newsltr.). VERMONT - Very prevalent. (MacCollom, June 12).

STABLE FLY (Stomoxys calcitrans) - WISCONSIN - Numerous in many areas; annoyance to cattle slight to moderate in most areas except Outagamie County where annoyance severe. (Wis. Ins. Sur.). IOWA - First of season June 3. This is 25 days later than 1965 and 10 days later than 1966. Cool, dry weather probably delayed emergence. (Iowa Ins. Inf.). OKLAHOMA - Ranged 10-12 per head on cows in Payne County. (Okla. Coop. Sur.).

HOUSE FLY (Musca domestica) - UTAH - Numerous about some corrals and dairy farms in Davis and Weber Counties. (Knowlton). OKLAHOMA - Ranged 40-50 per Scudder grid in untreated barns in Payne County. (Okla. Coop. Sur.). GEORGIA - Adults annoying beef cattle in Thomas County (Whittle, Nolan); larvae infesting hog droppings and numerous adults around hog operation in Wilkinson County (Maxey, Nolan); adults and larvae numerous in caged layer operations in Clarke County (Massey). FLORIDA - All stages very heavy in manure from 50,000 chickens in caged poultry operations near Molino, Escambia County. (Strayer, June 7). NEW JERSEY - Continue rapid increase throughout State. Controls recommended for dairy cattle and poultry. (Ins.-Dis. Newsltr.).

FACE FLY (Musca autumnalis) - WISCONSIN - Present in most areas; no problems. (Wis. Ins. Sur.). OHIO - Rapid increases on cattle expected with prolonged warm weather. Holstein dairy cattle in Logan County with 10-50 flies per face (averag 28). Face flies on backs of animals; cattle clustered in tight group. (Rose). GEORGIA - Heavy on herd of 30 Hereford cows and calves in Rabun County. (Coleman).

TABANID FLIES - UTAH - Horse flies annoying horses near Brigham City, Box Elder County, and Layton, Davis County. (Knowlton). OKLAHOMA - Tabanus lineola complex averaged 2 per head on horses in Payne County. Counts per head on horses in Cherokee and Muskogee Counties as follows: T. lineola complex 3-4, T. abactor 2-3, and T. equalis 1-2. (Okla. Coop. Sur.). MISSOURI - Light numbers feeding on undersides and udders of beef cattle in east-central area. Munson). WISCONSIN - Horse flies slightly annoying cattle in Price County. (Wis. Ins. Sur.). Deer fly adults becoming evident in localized areas from Dane County north to Vilas County. (Wis. Ins. Sur.). VERMONT - Horse flies and deer flies becoming numerous and annoying to livestock. (MacCollom, June 12). CONNECTICUT - Deer flies abundant and annoying. (Savos). GEORGIA - Many species annoying beef cattle and causing blood loss in Hancock County. (Nolan).

LESSER MEALWORM (Alphitobius diaperinus) - NEW JERSEY - Adults extremely heavy in poultry farm near Vineland; becoming nuisance to neighbors. Apparently coming from spilled feed in manure pits beneath wire floor. (Ins.-Dis. Newsltr.).

DARK MEALWORM (Tenebrio obscurus) - CALIFORNIA - Heavy in earthworm bed media in Clovis, Fresno County. (Cal. Coop. Rpt.).

AMERICAN DOG TICK (Dermacentor variabilis) - RHODE ISLAND - Record numbers continue in parts of northern and western areas. (Mathewson, June 9). CONNECTICUT - Complaints numerous statewide. (Savos). OKLAHOMA - Occasionally annoying to man in Payne County. (Okla. Coop. Sur.).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Averaged 20 replete females, 80 unfed females, and 3 nymphs per head on cows in Cherokee and Muskogee Counties; annoyance to residents in area decreasing. Moderate on cattle in Mayes and Marshall Counties. (Okla. Coop. Sur.).

STORED PRODUCTS

GRAIN MITE (Acarus siro) - CALIFORNIA - Heavy in sacked oats in storage in Oregon House, Yuba County. (Cal. Coop. Rpt.).

BENEFICIAL INSECTS

LADY BEETLES - MISSISSIPPI - Numbers very high in cotton and soybeans. (Dinkins). OKLAHOMA - Hippodamia convergens adults ranged 6-10 per 200 feet of row in cotton in Jackson and Harmon Counties. Only occasional larva seen. (Okla. Coop. Sur.). NEBRASKA - Lady beetles ranged 0-12 (averaged 5) per 10 sweeps on alfalfa in Gage and Lancaster Counties. (Keith).

A PUNCTURE-VINE SEED WEEVIL (Microlarinus lareynii) - NEW MEXICO - Few puncture-vine plants growing due to dry weather; however, almost every seed on plants with larva or pupa within. (Campbell).

A GROUND BEETLE (Calosoma frigidum) - PENNSYLVANIA - Adults averaged about 6 per tree infested with fall cankerworm; adults preying on larvae. (Gesell).

DAMSEL BUGS (Nabis spp.) - NEBRASKA - Averaged about 2 per 10 sweeps in Gage and Lancaster County alfalfa. (Keith). MISSISSIPPI - Moderate to high in cotton and soybean; numbers higher in soybeans. (Dinkins).

BIG-EYED BUGS (Geocoris spp.) - MISSISSIPPI - Numbers high in cotton but low in soybeans. (Dinkins).

AN ALFALFA LEAFCUTTING BEE (Megachile rotundata) - WASHINGTON - Males moderate, emerged in nest stations under natural conditions by June 9 (not incubated) in Walla Walla, Lowden, and Touchet areas, Walla Walla County about 2 weeks later than 1966. (Johansen, Eves).

ALKALI BEE (Nomia melanderi) - WASHINGTON - Adult males fairly active on earliest nest sites June 8 near Lowden and Touchet, Walla Walla County; first females digging new nests at 2 locations; pupae only up to eye-colored stage in late nest sites. Few Heterostylum robustum, a parasitic bee fly, laid eggs in alkali bee emergence holes. (Johansen, Eves).

A CHALCID (Monodontomerus obscurus) - IDAHO - This parasite of Megachile rotundata first observed emerging in numbers near Parma, Canyon County, May 18. (Waters).

FEDERAL & STATE PLANT PROTECTION PROGRAMS

GRASSHOPPERS - UTAH - Cold, wet spring reduced numbers and outbreak outlook in many parts; decreased from 15 to 1 per square yard in Fisher Valley, Grand County; also reduced in Salt Valley, northeast of Moab. Hatching in Uintah and Duchesne Counties. (Thornley, Knowlton). COLORADO - Low, 1-2 per square yard, on rangeland pasture in Las Animas and Pueblo Counties; first and second instars in crop margins being sprayed in Mesa County; hatching in Delta County; Melanoplus bivittatus, M. differentialis, M. femurrubrum and other number 20 per 100 sweeps. (Hantsbarger et al.). NEW MEXICO - Averaged 2-4 nymphs per 25 alfalfa sweeps in northern San Juan County fields and 3-8 nymphs per 25 sweeps in Curry and Roosevelt County fields. (Kloepfer, Nielsen). Approximately 12 sections of rangeland east of Crossroads, Lea County, with 5-20 first to fourth instars per square yard. In one area near Ration, Colfax County, first instars as high as 40 per square yard. (PPC). OKLAHOMA - Range and crop margin numbers in Cimarron and Texas Counties generally below threatening level. Most grassland counts ranged 1-6 per square yard. Nymphs 7-12 per square yard on about 5,000 acres in northwest Cimarron County; averaged 15 per square yard in few scattered rangeland areas in Texas County. Ageneotettix deorum, Amphitornus coloradus, and Phlibostroma quadrimaculatum dominant; approximately 80 percent first instar. One small band of Metator pardalinus in Texas County. Economic counts of 8-20 per square yard on approximately 15,000 acres of rangeland in eastern half of Beaver County. A. deorum, A. coloradus, P. quadrimaculatum, and Melanoplus bivittatus dominant. Ranged 2-7 per square yard at other stops in county. Economic infestations of 10-20 per square on 10,000 acres of Beckham

County grassland, 25,000 acres in Ellis County, and 10,000 acres in Roger Mills County. P. quadrimaculatum, A. deorum, Aulocara elliotti, and M. bivittatus dominant; ranged second to fourth instar. (Okla. Coop. Sur.). NEBRASKA - No more than 1 per 2 sweeps in Sheridan, Grant, and Hooker Counties. (Raun). SOUTH DAKOTA - Hatch held back by cool, rainy weather in much of State, except in following areas: Numbers in southern Tripp County, near Wewela, 15 per square yard along roadsides and field margins and 1 per square yard in alfalfa; M. bivittatus and M. sanguinipes up to third instar; M. differentialis and Ageneotettix deorum up to second instar; M. femurrubrum in first instar. Noneconomic in Lyman, Stanley, Hughes, Hyde, Hand, and Beadle Counties. (Burge) In Meade County, south of Howes, on Cheyenne River, one per square yard in fields and 4-6 along roadsides, maximum of 10 per square yard in one location; M. bivittatus dominant on river bottom, A. deorum on high ground. Near Wasta, Pennington County, generally up to 10 per square yard, as in State Highway 40 and Cheyenne River area, although in localized weedy areas up to 200 per square yard; M. differentialis up to third instar. (Burge, Zimmerman). On rangeland in western Custer County, 1-4 nymphs per square yard; situation similar on Fall River County rangeland. (Zimmerman). In weedy areas near Hot Springs airport, Fall River County, up to 100 per square yard; M. bivittatus up to fourth instar. In irrigated alfalfa near Oral, 8-10 per square yard in fields and 40 per square yard in margins; M. bivittatus up to third instar. (Burge, Kantack). NORTH DAKOTA - Up to second instars (mostly second) noneconomic; ranged 0-5 (averaged less than 1) per square yard, M. bivittatus most abundant with some M. sanguinipes and Camnula pellucida. (Stoltenow, Coupe). MINNESOTA - First instars, probably M. bivittatus, averaged one per square yard in Norman County alfalfa field. M. femurrubrum eggs in this county coagulated and segmented. Some M. bivittatus in Redwood, Lyon, and Pipestone Counties. (Minn. Ins. Rpt.). IOWA - First and second instars low in road ditches and fence rows in central area. (Mast).

CARIBBEAN FRUIT FLY (Anastrepha suspensa) - FLORIDA - Numbers continue to increase. Host list and distribution gradually increasing; no major commercial crops affected. Two larvae collected from litchi fruit from tree in West Miami, Dade County, June 13. (Swanson, Dillon). This is new host record. (Fla. Coop. Sur.).

CEREAL LEAF BEETLE (Oulema melanopus) - ILLINOIS - Larvae in Woodford, Edgar and Iroquois Counties for new county records. (Kuhlman). INDIANA - Moderate to severe on oats in northwestern St. Joseph and northwestern La Porte Counties and light to moderate in Allen and Noble counties. Two larvae per plant in Noble County fields. (Matthew). OHIO - Survey made in 27 wheat and 2 oat fields in township in Williams County to indicate population intensity. Larvae ranged 0-54 per 100 sweeps (average 7.1 larvae) per field; adults 0-4 per 100 sweeps (averaged 0.52). (Turner, et al.). Some approaching pupation in Franklin and Perry Counties (Walker). Wheat conditions progressing well; some southern county fields began to turn. (Rose).

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - In Bakerfield, Kern County, control area circumscribed by intensive inspection band approximately 0.5 mile wide. None beyond original 5 infested blocks. In San Diego, San Diego County, new focus of infestation apparently developing at Encanto, Lemon Grove, La Mesa area. This new area more heavily planted to citrus and other host plants. Warm weather decreasing sprayer operations. Total of 1,094 blocks sprayed. Intensive survey of quarantine zone in Fresno, Fresno County, continued; all collections negative. In Sacramento, Sacramento County, additional 16 buffer blocks infested; to be treated when property owners contacted. First-generation crawlers found; some spray and dust test materials being applied. (Cal. Coop. Rpt.).

EUROPEAN CHAFER (Amphimallon majalis) - OHIO - Adults began to emerge at Cleveland and in Cuyahoga County. Evening flight activity began night of June 13-14. (Shephard, Custer).

GYPSY MOTH (Porthetria dispar) - NEW YORK - Sprays applied June 7 at Nissequogue, Head of Harbor, and San Remo (Kings Park), Suffolk County. (N. Y. Wkly. Rpt., June 12). CONNECTICUT - Larvae active in Norwick and Old Lyme areas. (Savos).

JAPANESE BEETLE (Popillia japonica) - RHODE ISLAND - One adult collected on Japanese knotweed at Kingston, Washington County, perennial site of early beetles. (Mathewson, June 6). VIRGINIA - First adults of season on pyracantha in Portsmouth June 9. (Cunningham). SOUTH CAROLINA - First specimen of season on corn in Pickens County. (Nettles et al., June 13)

MEXICAN FRUIT FLY (Anastrepha ludens) - CALIFORNIA - Total of 3,174 traps in operation. Nine sterile flies trapped, made total of 12 for this season; one caught on Otay Mesa, San Diego County, 2 miles north of United States-Mexican border. (Cal. Coop. Rpt.).

ORIENTAL WOOD BORER (Heterobostrychus aequalis) - FLORIDA - Larvae and adults collected from "mahogany lumber" at lumber company in Jacksonville, Duval County, June 14. This is new county record. (Fla. Coop. Sur.).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Moth numbers in sex lure traps remain about same as last week. Larvae numerous in squares and blooms in Yuma and Maricopa Counties; few in Graham County; bloom infestations 1-25 percent in Maricopa County. (Ariz. Coop. Sur.).

WESTERN GRAPE LEAF SKELETONIZER (Harrisina brillians) - CALIFORNIA - First 9 moths of seaon collected in Sacramento County; one found in Davis, Yolo County. Surveys negative in Fresno, Fresno County; Livermore, Alameda County; and Stratford, Kings County. (Cal. Coop. Rpt.).

WHITE-FRINGED BEETLES (Graphognathus spp.) - ALABAMA - Larvae destroyed second planting of corn in 50-acre field near Evergreen, Conecuh County. Following soil treatment, field planted to soybeans. (Lemons et al.).

HAWAII INSECT REPORT

Vegetables - Abundant DIAMONDBACK MOTH (Plutella xylostella) larvae seriously damaged head cabbage at Wailua, Kauai. Adults also abundant. (Au). Larvae and adults of LEAF MINER FLIES (Liriomyza spp.) heavy on Oahu in several snap bean fields at Waimanalo and Waianae and in large watermelon fields at Kahuku. Controls difficult. (Yamamoto, Sato). TOMATO FRUITWORM (Heliothis zea) larvae medium in tomato fields in Waialua and Halawa, Oahu. (Yamamoto).

Fruits - OBSCURE MEALYBUG (Pseudococcus obscurus) scattered and light decreasing in 200 acres of passion-fruit at Kahului, Maui. Larvae of a LADY BEETLE (Cryptolaemus montrouzieri) moderate amid mealybug infestation. (Miyahira). Nymphs and adults of a WHITEFLY, probably Bemisia giffardi heavy on 25 citrus trees in nursery at Wailuku, Maui. (Takishita). LITCHI MITE (Aceria litchii) medium to heavy on litchi trees throughout Hilo, Hawaii. Damaged leaves very conspicuous. (Yoshioka). Young nymphs of HEMISPHERICAL SCALE (Saissetia coffeae) numerous and adults light (1 per leaf) on several citrus trees at Kula, Maui. (Funasaki).

Ornamentals - SOUTHERN GARDEN LEAFHOPPER (Empoasca solana) nymphs and adults very heavy on wedelia at several residences in Kaneohe, Oahu. (Kawamura).

Shade Trees - MONKEYPOD MOTH (Polydesma umbricola) and BLACK WITCH MOTH (Ascalapha odorata) defoliation 50-90 percent on 20 trees at Lahaina area, Maui; late instars light to medium under tree bark. (Funasaki, Miyahira).

Beneficial Insects - Larvae of an introduced TORTRICID MOTH (Aptoforma sp.) very heavy on blackberry at Olinda and Waiakamoi, Maui; on 90 percent of terminal leaves in many areas. (Miyahira). Many fresh oviposition scars on lantana stems indicate recent adult emergence of LANTANA CERAMBYCID BEETLE (Plagiohammus spinipennis) throughout Kau, Hawaii Island. (Yoshioka). Adults of TACHINA FLY (Trichopoda pennipes var. pilipes) often seen in vacant, weedy areas and in small, backyard vegetable plantings at Lahaina and Kahului, Maui. (Ah Sam).

INSECT DETECTION

New State Records

A PLANT BUG (Pilophorus laetus) - DELAWARE - Adult collected in blacklight trap at Dover, Kent County, July 13, 1966, by J. Franklin. Det. by R. C. Froeschner. Reported in literature as breeding on Pinus virginiana. (Burbutis).

A PLANT BUG (Slaterocoris pallipes) - DELAWARE - Adults collected in blacklight trap at Dover, Kent County, August 13, 1966, by J. Franklin. Det. by R. C. Froeschner. (Burbutis).

New County Records

ALFALFA WEEVIL (Hypera postica) - INDIANA - Whitley County. ILLINOIS - Stark and Putnam Counties. MISSOURI - Adair County. NEBRASKA - Near Ringgold, McPherson County. (p. 533). WASHINGTON - At Ellenburg, Kittitas County. (p. 534).

MEADOW SPITTLEBUG (Philaenus spumarius) - MISSOURI - Clark, Adair, Knox, Marion, Scotland, and Shelby Counties. (p. 535).

CEREAL LEAF BEETLE (Oulema melanopus) - ILLINOIS - Woodford, Edgar, and Iroquis Counties. (p. 549).

ORIENTAL WOOD BORER (Heterobostrychus aequalis) - FLORIDA - At Jacksonville, Duval County. (p. 550).

CORRECTIONS

CEIR 17(24):503 - CORN FLEA BEETLE (Chaetocnema pulicara) should read (Chaetocnema pulicaria).

CEIR 17(24):505 - A PYRALID MOTH (Surratha indentella) should read (Surattha indentella).

CEIR 17(24):511 - A MINT APHID (Ovatus crataegius) should read (Ovatus crataegarius). Pupae should read Populations. (Morrison).

CEIR 17(24):516 - Citrus Insect Situation in Florida - End of May - Line 25: (Aonidiella cintrina) should read (Aonidiella citrina).

CEIR 17(24): 517 - TENT CATERPILLARS (Malcosma spp.) should read (Malacosoma spp.).

CEIR 17(24):520 - HORSE BOT FLY (Gasterophlus intestinalis) should read (Gasterophilus intestinalis).

CEIR 17(24):523 - HAWAII INSECT REPORT - Vegetables - Line 4: (Liromyza spp.) should read (Liriomyza spp.)

CEIR 17(24):524 - INSECT DETECTION - A PSYLLID (Psylla uncatoides) - HAWAII - Maui. (p. 523).

CEIR 17(24):522 - CEREAL LEAF BEETLE (Oulema melanoplus) should read (Oulema melanopus).

CEIR 17(24):521 - AN ICHNEUMON WASP (Bathyplectes cucurlionis) should read (Bathyplectes curculionis).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL = blacklight, I = incandescent, MV = mercury vapor, O = other)	Agrotis ipsilon (black cutworm)	Carpocapsa pomonella (codling moth)	Chorizagrotis auxiliaris (army cutworm)	Estigmene acrea (salt-marsh caterpillar)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Loxostege commixtalis (alfalfa webworm)	Loxostege similalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-striped armyworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA																								
Gainsville 6/12			BL						2															
GEORGIA																								
Tifton 5/31-6/7	54-92	1.35	BL							2	6													
Tifton 6/8-14	54-90	0.07	BL							1	25					3								
ILLINOIS (County)																								
Champaign 6/8-15	63-89	0.89		31													42	10		99				
IOWA (Counties)																								
Dubuque 6/7-12		4.1	BL	2				21										4		47				
Monona 6/2-8			BL	4				7										3		18				
MARYLAND																								
Centreville 6/6-12				3													94	4		2				
Snow Hill 6/7-13				1													82			15				
MINNESOTA																								
Shakopee 6/8-15													1				7			2				
Worthington 6/8-15					1	1											4	3						
Fergus Falls 6/8-15													2							1				
Crookston 6/8-15				1									3					4		2				
MISSISSIPPI																								
Stoneville 6/10-16	69-95	0.25	2BL	3			38		6	5	45					1		10	107	3			5	
Rolling Fork 6/10-16	68-94	trace	BL	5			5		5	16	44					12		1	30	2			20	
Tunica 6/10-16	68-94	0.07	BL	11					18		5					6		1	87	2			8	
MISSOURI																								
Portageville 6/9-16				1							21							7	11	12				
NORTH DAKOTA																								
Bismarck 6/12													14											
Fargo 6/15																				8				
OHIO																								
Hilliard 6/6-13			BL	1				14									42			5				
Wooster 6/6-13			BL	2				17									15			10				
Ripley 6/6-13			BL	17				9									13			29				
Marietta 6/6-13			BL	1				10									4			6				
SOUTH CAROLINA																								
Charleston 6/5-11	64-85	0.09	BL	1					2	1	4							1	6				8	
Charleston 6/12-18	68-86	0.80	BL	1					3	4	9					1		2	11	1			12	
TENNESSEE (Counties																								
Hardeman 6/6-12				4							12									16				
Madison 6/6-12				24																8				
Maury 6/6-12																4		24	8	8				
Cumberland 6/6-12				20							4				4	2			40	16				
Greene 6/6-12				14							16					4			22	28				
Knox 6/6-12				64							8							24	8	32				
Johnson 6/6-12				5														6	2	16				

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL = blacklight, I = incandescent, MV = mercury vapor, O = other)	Agrotis ipsilon (black cutworm)	Carpocapsa pomonella (codling moth)	Chorizagrotis auxiliaris (army cutworm)	Estigmene acrea (salt-marsh caterpillar)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Loxostege commixtalis (alfalfa webworm)	Loxostege sticticalis (garden webworm)	Loxostege sticticalis (beet webworm)	Mandula quinquemaculata (tomato hornworm)	Mandula sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-striped armyworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)	Crops
TEXAS																								
Waco 6/10-16				13					63	3	258						4	16		14	2	44		
WISCONSIN																								
Madison 6/8-13			BL	3	27											38	4		30					
Platteville 6/10-13			BL	5	2											35	14		219					
DeForest 6/6-12			BL																144					
Rosendale 5/30-6/5			BL																29					
Ripon 5/30-6/5			BL																14					

Continued from page 528.

WEATHER OF THE WEEK ENDING JUNE 19, 1967

HIGHLIGHTS: Another very wet week with many storms in the upper Midwest. Warm in the East but continued cool in the West.

PRECIPITATION: Violent weather continued over the northern and central Great Plains in connection with a storm system which remained stationary for eleven days. Tornadoes and violent thunderstorms, some accompanied by strong gusty winds, large hail, and heavy rains occurred from the Dakotas and Minnesota southward to New Mexico and Texas. A few tornadoes occurred in New York and New England. On Wednesday, hail as large as golf balls accumulated to 6 inches in northeastern Colorado. About a score of the tornadoes occurred Wednesday afternoon in 8 States causing property damage but few personal injuries. In eastern Nebraska and nearby State areas and extending to as far as Wyoming and Wisconsin, two to three weeks of persistent heavy rain showers have caused much flash and river flooding and otherwise seriously hampered agricultural activity. Parts of eastern Nebraska have received 11 to 13 inches in three weeks. As the weekend approached, cooler and more stable air moved into the Great Plains and stormy weather diminished. A late-week storm off the Carolina coast brought generous rains to the Atlantic coast. A large area from the lower Rio Grande Valley extending northeastward to northern Virginia received little or no rain for the second week. However, in Florida where the summer shower season began on schedule in early June, reports of moderate to heavy rains have replaced the drought stories of a few weeks ago.

TEMPERATURE: Afternoon temperatures over most of the eastern half of the United States climbed to the high 80's or low 90's on most days but were somewhat cooler on Sunday. In some areas, it was the warmest week since mid-July 1966 and a few degrees warmer than last week. It was the 2nd hot week in the Northeast but the 5th cool week from Alabama to North Carolina and southward to Florida. Temperatures averaged below normal from California to the western Great Plains. Utah averaged 5° to 9 ° cooler than normal. In general it was the 3rd cool week in this area. Washington and Oregon averaged 2° to 6° warmer than normal. (Summary supplied by Environmental Data Service, ESSA).

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